(b) if so, the details including the estimated value thereof;

(c) the extent of concentration of Uranium in those deposits; and

(d) how the deposits would be utilised?

THE MINISTER OF STATE OF THE MINISTRY OF PLANNING AND PROGRAMME IMPLEMENTATION AND MINISTER OF STATE OF THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI YOGINDER K. ALAGH): (a) Yes, Sir.

(b) and (c) Two Uranium deposits have been located at Lambapur-Yellapur in Nalagonda District and Tummalapalle in Cuddapah District of Andhra Pradesh. Reserves of about 1700 tonnes of Uranium Oxide have been established and existence of an additional 2300 tonnes in inferred in Lambapur-Yellapur, where the average grade is 0.07% $U_3 O_8$. About 15000 tonnes of grade 0.05% $U_3 O_8$ reserves have been established in Tummalapalle region. Estimated value of these deposits would be known after the detailed evaluation.

(d) Government have not yet taken a decision on the utilisation of those deposits.

Installed capacity of Atomic Power Plants

567. DR. MANMOHAN SINGH: Will the PRIME MINISTER be pleased to state:

(a) what is the installed capacity of atomic power plants, as at the end of 1996-97;

(b) what are the estimates of capacity utilisation;

(c) whether Government are contemplating any measures to streamline project management in these plants; and

(d) if so, what are the details thereof?

THE MINISTER OF STATE OF THE MINISTRY OF PLANNING AND PROGRAMME IMPLEMENTATION AND MINISTER OF STATE OF THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI YOGINDER K. ALAGH): (a) The total installed generating capacity of nuclear power plants in the country at the end of 1996-97 is 1840 MWe. Of this Unit-1 of Rajasthan Atomic Power Station of 100 MWe capacity is under rehabilitation and Unit-2 of Rajasthan Atomic Power Station of 200 MWe capacity is under capital maintenance shutdown for coolant channel replacement and upgradation of systems. These Units are expected to be back on line during 1997-98. Thus the effective capacity of nuclear power stations in the country presently is 1540 MWe.

(b) During the current financial year 1996-97, upto 31.1.97 Nuclear Power Corporation of India Limited (NPCIL) has achieved on overall capacity factor of 64% and for the year as a whole it is expected to reach 66%, even though the Tarapur Unit-1 and Madras Unit-1 had to undergo mandatory in-service inspection and shut down for long periods during 1996-97. Kakrapar and Narora Atomic Power Stations have achieved a capacity factor of 84% and 68% respectively during 1996-97 upto 31.1.97. During the second half of 1996-97 upto 31.1.97, NPCIL has achieved an overall capacity factor of 78.23%

(c) and (d) Concerted efforts have been made to improve the plant load factor and availability factor of the operating nuclear power plants and as a result, the performance has improved over the past two years. The measures taken to improve performance of nuclear power plants include strengthening of condition monitoring and preventive and predictive maintenance, improving outage management, intensive training for maintenance and operating staff particularly with the use of simulators, modifications carried out on the turbo generators supplied by BHEL, effective coordination with Regional Electricity Boards to improve frequency control of the grid, decentralisation of decision

making to enable prompt action at the operating stations and exchange of technical information and experience through International bodies such as World Association for Nuclear Operators (WANO) and Candu Owners Group (COG).

Closure of atomic power plants

568. SMT. JAYANTI PATNAIK: Will the PRIME MINISTER be pleased to state:

(a) the number of atomic power plants closed down since 1995-96;

(b) the reasons for their closure;

(c) whether any efforts are being made by Government to revive those plants;

(d) if so, by when they are expected to go on stream; and

(e) the specific steps taken to look into the safety aspects of these plants?

THE MINISTER OF STATE OF THE MINISTRY OF PLANNING AND PROGRAMME IMPLEMENTATION AND MINISTER OF STATE OF THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI YOGENDER K. ALAGH): (a) to (d) No atomic power plant has been closed down so far. However, Unit-1 of Rajasthan Atomic Power Station (RAPS) which is the first pressurised heavy water reactor in India, commissioned in 1972, has been shut down since February, 1994 due to a minor but difficult-to-repair leak from the Over Pressure Relief Device (OPRD). Robotic toolings and specialised technology were developed totally indigenously, mock-up trails were conducted and the leak has been successfully fixed recently. Application for re-starting operation of RAPS-1 has been submitted to the regulatory authority and the unit is expected to be back in operation subject to regulatory clearance during 1997-98.

Unit-2 of Rajasthan Atomic Power Station which has performed well during its commercial operation from April, 1981 upto July 1994, has been shut down from August, 1994 for on masse coolant channel replacement and upgradation of systems. These works are in the nature of capital maintenance and are progressing satisfactorily. RAPS-2 is expected to be re-commissioned during 1997-98.

(e) The safety aspects of nuclear power plants are reviewed regularly by multi-tier safety committee constituted by NPPCIL and AERB. In addition to these reviews, a detailed "Internal Safety Review of Operating Sations" is carried out every five years. "Assessment of safety significant Event Teams (ASSET)" conduct reviews on specific events.

Enhancement of existing level of safety is continuous evolutionary process being carried out based on national and international experience. As part of this process, detailed in-service inspection and on masse coolant channel replacement and upgradation of systems are being carried out in RAPS Unit-2. Extensive in-service inspection of coolant channels was carried out at both the units of Madras Atomic Power Station in the last two years. Likewise, extensive core shroud inspection in the reactor vessel was carried out at both the units of Tarapur Atomic Power Station during their re-fuelling shut-downs. These inspections were carried out as a measure of abudant caution to ensure high levels of operational safety.

Schemes to promote latest technologies in Electronics

569. SHRI GYAN RANJAN: Will the PRIME MINISTER be pleased to state:

(a) the schemes formulated by Government to promote latest technologies in the field of Electronics;

(b) the amount proposed to be spent thereon; and

(c) the present position of the country in comparison to other developing Asian countries in this regard?